

FIG. 1B

WAKE UP SIGNAL

ANSWER SIGNAL

ANSWER SIGNAL

PORTABLE DEVICE FINDING SIGNAL

PORTABLE DEVICE FINDING ANSWER SIGNAL

PORTABLE DEVICE FINDING ANSWER SIGNAL

2/10

		RELATI INTENSITI	RELATIONS OF THE TRANSMISSION INTENSITIES FROM THE TWO ANTENNAS	AISSION ANTENNAS
PORTABLE DEVICE POSITION	AREA	Pt (D1) > Pt (A1)	Pt (D2) = Pt (A2)	Pt (D3) < Pt (A3)
OUTSIDE THE VEHICLE ON THE DRIVER'S SEAT	Dout	E (D1) > > E (A1)	E (D2) > > E (A2)	E (D3) > E (A3)
NEAR THE DRIVER'S SEAT	Dd NEAR THE DOOR	E (D1) > E (A1)	E (D2) > E (A2)	E (D3) > E (A3)
	Dc CENTER OF THE DRIVER'S SEAT	E (D1) > E (A1)	E (D2) > E (A2)	E (D3) = E (A3)
	Dcc NEAR THE CENTER OF THE VEHICLE	E (D1) > E (A1)	E (D2) > E (A2)	E (D3) < E (A3)
ON THE CENTER LINE OF THE VEHICLE	0	E (D1) > E (A1)	E (D2) = E (A2)	E (D3) < E (A3)
NEAR THE ASSISTANT DRIVER'S SEAT	Acc NEAR THE CENTER OF THE VEHICLE	E (D1) > E (A1)	E (D2) < E (A2)	E (D3) < E (A3)
	Ac CENTER OF THE ASSISTANT DRIVER'S SEAT	E (D1) = E (A1)	E (D2) < E (A2)	E (D3) < E (A3)
	Ad NEAR THE DOOR	E (D1) < E (A1)	E (D2) < E (A2)	E (D3) < E (A3)
OUTSIDE THE VEHICLE ON THE ASSISTANT DRIVER'S SEAT	Aout	E (D1) < E (A1)	E (D2) < < E (A2)	E (D3) < < E (A3)

TOURTH SEATHORN

FIG. 3

Title: RADIO SYSTEM Inventor(s): Kentaro HARA Appl. No.: 09/941,732

0/1

AREA Dout Aout ဓ Poc පි മ B FRONT OF THE VEHICLE ASSISTANT DRIVER'S SEAT DRIVER'S SEAT 52

FIG. 4A

MODE	
1 ,	E (D) > > E (A)
2	E (D) > E (A)
3	E (D) = E (A)
4	E (D) < E (A)
5	E (D) < < E (A)

FIG. 4B

AREA	MODE CONBINATION
Dout	112
Dd	222
Dc	223
Dcc	224
С	234
Acc	244
Ac	344
Ad	444
Aout	455

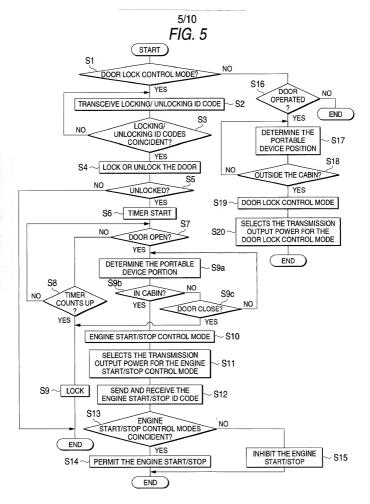


FIG. 6

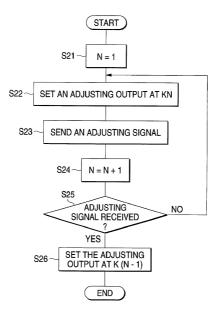
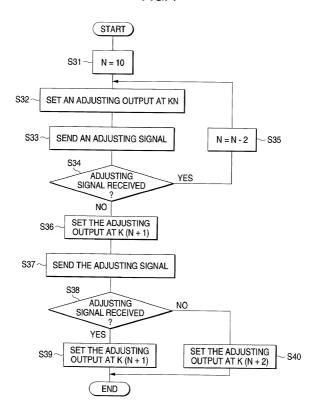


FIG. 7



8/10

FIG. 8A

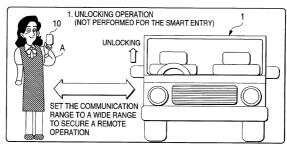


FIG. 8B

2. GET IN THE VEHICLE WHILE CARRYING THE PORTABLE DEVICE. AT THIS TIME, SPECIFY A POSITION OF THE PORTABLE DEVICE AND ITS MOTION.

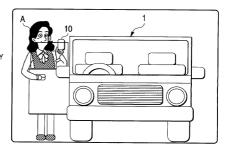
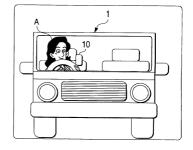


FIG. 8C

 MAKE AN AUTHENTICATION FOR THE PERMISSION OF ENGINE START. SELECT THE NARROWEST COMMUNICATION RANGE (IN-CABIN COMMUNICATION RANGE) NECESSARY FOR THE AUTHENTICATION.



9/10

FIG. 9A

1. THE USER HOLDS THE PORTABLE DEVICE, AND THE DEVICE HAS AN AUTHENTICATION CODE.

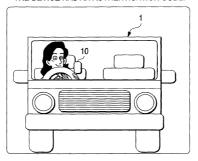
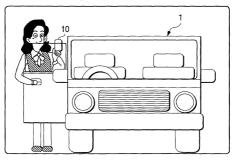


FIG. 9B

 GET OFF THE VEHICLE WHILE HOLDING THE PORTABLE DEVICE. AT THIS TIME, SPECIFY A POSITION OF THE PORTABLE DEVICE AND ITS MOTION.



10/10

FIG. 10A

3. LEAVE VEHICLE WHILE HOLDING THE PORTABLE DEVICE. AT THIS TIME, DETECT THE USER GETS OFF THE VEHICLE, FROM THE PORTABLE DEVICE'S MOTION.

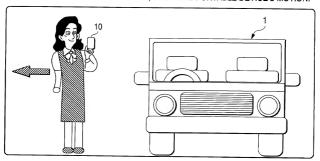


FIG. 10B

4. THE STATIONARY DEVICE CANNOT COMMUNICATE WITH THE PORTABLE DEVICE, AND RECOGNIZES THAT THE PORTABLE DEVICE IS NOT WITHIN THE CABIN, AND LOCKS THE DOOR.

